

CLAIMS

C362.02/K

1. An ophthalmoscope comprising illuminating optics for projecting a beam of light into an eye under examination and a housing containing imaging optics for creating an image of said eye for viewing by a user, the imaging optics comprising an objective lens system and an eye piece lens system, wherein the ophthalmoscope includes two corneal reflex stops situated one on either side of the corneal image formed by the objective lens system in use, to block reflections from the cornea of the eye under examination.
2. An ophthalmoscope according to claim 1, in which the ophthalmoscope is an indirect ophthalmoscope.
3. An ophthalmoscope according to claim 1 or claim 2, in which the housing also contains the illuminating optics.
4. An ophthalmoscope according to any of the preceding claims, in which each corneal reflex stop has a straight edge, the portion of the stop adjacent to said edge blocking the reflex.
5. An ophthalmoscope according to claim 4, in which each said straight edge is horizontal in use.
6. An ophthalmoscope according to claim 4 or 5, in which the stops each have a part circular aperture, the edge forming a chord of said aperture.
7. An ophthalmoscope according to any of claims 4 to 6, in which the straight edge of each corneal reflex stop is spaced 2mm from the optical axis of the ophthalmoscope.

8. An ophthalmoscope according to any of the preceding claims, in which the ophthalmoscope includes an inverting lens interposed between the objective and eye piece lens systems, the inverting lens being operable to cause an erect, non-laterally inverted image of an eye under examination to be viewed through the eye piece.
9. An ophthalmoscope according to claim 8, in which the reflex stops are positioned one on either side of the inverting lens.
10. An ophthalmoscope according to any of the preceding claims, in which the two corneal reflex stops are separated by at least 10mm.
11. An ophthalmoscope according to any of the preceding claims, in which the ophthalmoscope includes a field stop at the position at which the objective lens systems forms an image of the retina of an eye under examination.
12. An ophthalmoscope according to claim 11 when appended to claim 8, in which the ophthalmoscope includes a further field stop.
13. An ophthalmoscope according to claim 12, in which said further field stop is at the position at which the inverting lens forms an image of the retina of an eye under examination.
14. An ophthalmoscope according to any of claims 11 to 13, in which the field stops are positioned one on either side of the corneal reflex stops so that the latter are situated between the field stops.
15. An ophthalmoscope according to any of claims 11 to 14, in which the ophthalmoscope includes a front stop, situated in front of the first said field stop operable to block lenticular reflexes from the eye under examination.

16. An ophthalmoscope according to claim 15, in which the front stop is operable to block the fourth Purkinje reflex.
17. An ophthalmoscope according to any of the preceding claims, in which the illuminating optics are adjustable so as to enable the alignment of the illuminating light with the field viewed through the imaging optics and/or to enable the blocking of the corneal reflex by said reflex stops.
18. An ophthalmoscope according to claim 17, in which the illuminating optics comprise a light source vertically spaced from the imaging optics, and a reflector for reflecting light from the source towards an eye under examination, the reflector being movable to achieve said adjustability.
19. An ophthalmoscope according to claim 18, in which the reflector is pivotable about a vertical axis and a horizontal axis perpendicular to the viewing direction from the ophthalmoscope to an eye under examination.
20. An ophthalmoscope according to claim 19, in which reflector is a partial reflector.
21. An ophthalmoscope according to any of claims 17 to 20, in which the reflector is situated in front of the objective lens system.
22. An ophthalmoscope according to any of claims 17 to 21, in which the illuminating optics include a focussing lens which is movable relative to a light source in a direction lateral to the path of the illuminating light through the illuminating optics.
23. An ophthalmoscope according to any of the preceding claims, in which the illuminating optics include a graticule for projecting an image onto the eye under examination.

24. An ophthalmoscope according to claim 23, in which the graticule is mounted on a support on which there is also provided at least one stop, the support being movable to bring either the stop or the graticule into registry with the path of the illuminating light through the illuminating optics, to enable image of the stop or the graticule either to be projected onto the eye under examination.
25. An ophthalmoscope according to claim 24, in which the support comprises a rotatable plate.
26. An ophthalmoscope according to any of the preceding claims, in which the ophthalmoscope includes focusing means comprising a control and a linkage connecting the control to a lens means in the imaging optics, the linkage comprising a bent flexible rod so arranged that the lens means is moved along the viewing path by non parallel movement of the control.
27. An ophthalmoscope according to claim 26 in which said control is slideable.
28. An ophthalmoscope according to claim 27, in which said sliding movement of the control is in a direction perpendicular to the viewing direction from the objective lens system to an eye under examination.
29. An ophthalmoscope according to any of claims 26 to 28, in which the lens means which is connected to the linkage is the eye piece lens system.
30. An ophthalmoscope according to any of the preceding claims, in which the ophthalmoscope provides adjustable magnification of the image of an eye under examination.
31. An ophthalmoscope according to claim 30, in which said adjustable magnification is achieved by means of two interchangeable inverting lens systems of differing

magnifying powers which are moveable so that either system may be moved into registry with the objective and eye piece lens system.

32. An ophthalmoscope according to claim 31, in which the two interchangeable inverting lens systems are mounted on a common cradle pivotally mounted in the ophthalmoscope so as to be moveable from one angular position, in which one of the inverting lens systems is in registry with the objective and eye piece lens systems, into another angular position in which the other inverting lens system is in registry with the eye piece and objective lens systems, only a respective one of the inverting lens systems being in registry with the objective and eye piece systems for each of the angular positions of the cradle.
33. An ophthalmoscope according to claim 32, in which the cradle is retained in each of said positions by one or more magnetic fasteners.
34. An ophthalmoscope according to any of the preceding claim, in which the ophthalmoscope includes a rest extending from the rear of the eye piece, the rest being operable to control the proximity of the user's eye to the eye piece lens assembly, and being extendible so that the ophthalmoscope has the same or similar viewing characteristics for a user with or without spectacles.